

PATENT COOPERATION TREATY

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NOTIFICATION OF ELECTION

(PCT Rule 61.2)

From the INTERNATIONAL BUREAU

To:

Assistant Commissioner for Patents
United States Patent and Trademark
Office
Box PCT
Washington, D.C.20231
ÉTATS-UNIS D'AMÉRIQUE

in its capacity as elected Office

Date of mailing (day/month/year) 07 March 2000 (07.03.00)	
International application No. PCT/CA99/00638	Applicant's or agent's file reference 29816-0015
International filing date (day/month/year) 15 July 1999 (15.07.99)	Priority date (day/month/year) 16 July 1998 (16.07.98)
Applicant KALIAGUINE, Serge et al	

1. The designated Office is hereby notified of its election made:

☒ in the demand filed with the International Preliminary Examining Authority on:
15 February 2000 (15.02.00)

☐ in a notice effecting later election filed with the International Bureau on:

2. The election ☒ was
☐ was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

<p>The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland</p> <p>Facsimile No.: (41-22) 740.14.35</p>	<p>Authorized officer</p> <p>Olivia RANAIVOJAONA</p> <p>Telephone No.: (41-22) 338.83.38</p>
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PATENT COOPERATION TREATY

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INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

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Applicant's or agent's file reference 29816-0015	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/CA 99/ 00638	International filing date (day/month/year) 15/07/1999	Priority date (day/month/year) 16/07/1998
International Patent Classification (IPC) or national classification and IPC C01B13/32		
Applicant UNIVERSITE LAVAL et al.		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.


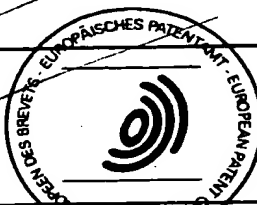
2. This **REPORT** consists of a total of 5 sheets, including this cover sheet.

☐ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consists of a total of _____ sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☒ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demand 15/02/2000	Date of completion of this report 02.11.00
Name and mailing address of the IPEA/  European Patent Office D-80298 Munich Tel. (+49-89) 2399-0, Tx: 523656 epmu d Fax: (+49-89) 2399-4465	Authorized officer Bernard Louis Petit 

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/CA99/00638

I. Basis of the report

1. This report has been drawn up on the basis of *(Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to the report since they do not contain amendments.)*

☒ the international application as originally filed

☐ the description, pages , as originally filed
pages , filed with the demand
pages , filed with the letter of

☐ the claims, Nos. , as originally filed
Nos. , as amended under Article 19
Nos. , filed with the demand
Nos. , filed with the letter of

☐ the drawings, sheets / fig. , as originally filed
sheets / fig. , filed with the demand
sheets / fig. , filed with the letter of

2. The amendments have resulted in the cancellation of:

☐ the description, pages:
☐ the claims, Nos.
☐ the drawings, sheets / fig.

3. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2 (c)).

4. Additional observations, if necessary:

IV. Lack of unity of invention

1. In response to the invitation (Form PCT/IPEA/405) to restrict or pay additional fees the applicant has:

- ☐ restricted the claims.
- ☐ paid additional fees.
- ☐ paid additional fees under protest.
- ☒ neither restricted nor paid additional fees.

2. ☐ This Authority found that the requirement of unity of invention is not complied with and chose, according to Rule 68.1, not to invite the applicant to restrict or pay additional fees.

3. This Authority considers that the requirement of unity of invention in accordance with Rules 13.1, 13.2 and 13.3 is

- ☐ complied with.
- ☒ not complied with for the following reasons:

The claims include a first invention (1) directed to the preparation of nanocrystalline perovskite or (perovskite-like) metal oxides and the resulting products as defined in claims 1 to 16.

The claims further comprise an invention (2) of claims 17, 18 an invention (3) of claims 19, 20, an invention (4) of claims 23, 24 and 27, an invention (6) of claim 25 and an invention (7) of claims 26, which are not unitary with invention (1), since the products claimed therein are not prepared by the process of invention (1) and thus are not defined in the same terms.

Unity of invention cannot be derived from the fact that they would constitute subgroups of a patentable family inherently obtainable by said process. The cited prior art confirms if necessary that at least some of the family are known products, such as those of claims 17 and 18 (see for instance XP-002119985).

Furthermore, the inventions (2) to (7) are not unitary, since perovskites with a high surface area (for example exceeding 30 m²/g) are known in the prior art. They constitute instead subgroups of the perovskites which are linked together by means of an inventive common concept.

In the absence of any response, further examination was carried out on the basis of said invention (1), regarded by this Authority as the main invention.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

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4. Consequently, the following parts of the international application were the subject of international preliminary examination in establishing this report:

- ☐ all parts.
- ☒ the parts relating to claims Nos.

1-16

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/CA99/00638**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement****1. Statement**

Novelty	Claims	1-12, 15	YES
	Claims	13, 14, 16	NO
Inventive Step	Claims	1-12	YES
	Claims	15	NO
Industrial Applicability	Claims	1-16	YES
	Claims		NO

2. Citations and Explanations

The prior art illustrated by US-A-4134852 (1) does not suggest any direct conversion to a mixed perovskite oxide by applying high energy milling.

However mixed oxides with a submicron size can be easily obtained by using this known method. Likewise other conventional methods such as illustrated in CHEM. ABSTRACT XP-002119985 (2) lead to perovskites with a nanocrystalline structure. The subject-matter of claims 13, 14 and 16 therefore lacks novelty. The synthesis of perovskite according to claim 15 is thus obvious in view of this known prior art.